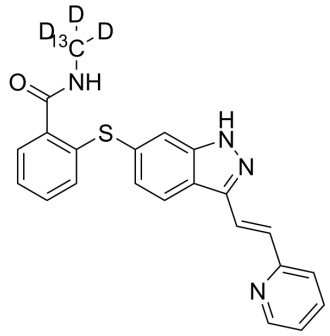
Axitinib-$^{13}C,d_3$

Cat. No.:	HY-10065S
CAS No.:	1261432-00-1
Molecular Formula:	$C_{21}{}^{13}CH_{15}D_3N_4OS$
Molecular Weight:	390.48
Target:	VEGFR; PDGFR
Pathway:	Protein Tyrosine Kinase/RTK
Storage:	-80°C



BIOLOGICAL ACTIVITY

Description	Axitinib-$^{13}C,d_3$ is a ^{13}C-labeled and deuterium labeled Axitinib. Axitinib is a multi-targeted tyrosine kinase inhibitor with IC50s of 0.1, 0.2, 0.1-0.3, 1.6 nM for VEGFR1, VEGFR2, VEGFR3 and PDGFRβ, respectively.
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Fenton BM, et al. The addition of AG-013736 to rractionated radiation improves tumor response without functionally normalizing the tumor vasculature. Cancer Res. 2007 Oct 15;67(20):9921-8.;Hu-Lowe DD, et al. Nonclinical antiangiogenesis and antitumor activities of axitinib (AG-013736), an oral, potent, and selective inhibitor of vascular endothelial growth factor receptor tyrosine kinases 1, 2, 3. Clin Cancer Res. 2008 Nov 15;14(22):7272-83;Allen E, et al. Metabolic Symbiosis Enables Adaptive Resistance to Anti-angiogenic Therapy that Is Dependent on mTOR Signaling. Cell Rep. 2016 May 10;15(6):1144-60.

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